



# HELPFILE

## PUT YOUR QUESTIONS TO OUR TECHNICAL EXPERTS

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Paul Mullen answers your computing queries

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Find out what hardware you need by visiting our Buying Clinic

#### FEEDBACK FIREWALLS

### SHOPPER GIVES CONFUSING FIREWALL ADVICE



In *Helpfile*, June 2005, you state that "You should not have two software firewall programs running at the same time". Yet in the verdict of your *Labs* test of personal firewalls in the same issue, you recommend using the free version of ZoneAlarm 5.5 in tandem with the firewall that comes with Windows XP Service Pack 2. On the same page, in the ZoneAlarm 5.5 review, there is a proviso that concerns reconfiguring ZoneAlarm and the Windows firewall, which is not fully explained.

I am now completely confused by the contradictory advice given on two pages of the same magazine and would be grateful if you could give me an explanation.

Peter Shadwick, by email

**A** We've had a number of emails and letters about this, Peter. We gave a short reply in last month's *Letters* when we said, "Generally speaking, you should run one firewall, not two. The answer in *Helpfile* was correct, because running two products simultaneously can cause your PC to run unnecessarily slowly in some cases, and if you are trying to create a firewall rule in one program, the other might have conflicting rules. This creates a situation where nothing seems to work properly and you won't know why."

Both Zone Labs, makers of ZoneAlarm, and Microsoft recommend that you turn off the Windows firewall if you install ZoneAlarm. If you install ZoneAlarm on a system that runs Service Pack 2 (SP2) it automatically disables the

Windows firewall, re-enabling it when ZoneAlarm is uninstalled. ZoneAlarm does work with the Windows Security Center, and Security Center will recognise that ZoneAlarm is providing firewall protection.

ZoneAlarm and SP2 Windows Firewall provide similar protection against incoming traffic, but ZoneAlarm also protects against outgoing traffic from programs that you may not know are installed on your system, such as viruses, spyware and Trojans. So it is usually better to run ZoneAlarm instead of the Windows firewall.

However, there are special cases. In the firewalls group test, our test PCs ran Microsoft's Internet Information Services (IIS) server, which we wanted to configure to provide a web server to the outside world but File Transfer Protocol (FTP) and Simple Mail Transfer Protocol (SMTP) services to the local network only. This required rules for specific ports, restricting access to the ports used by FTP and SMTP to local network addresses.

The IIS configuration software and ZoneAlarm wouldn't allow us to do this, but the Windows SP2 firewall could impose these rules. ZoneAlarm and Windows Firewall get along with each other well – the main reason for not running both is loss of performance – so in this rare case it makes sense to run the two in tandem. Unless you have this special requirement, though, you should run just one software firewall.

### CONTACTING HELPPFILE

#### EMAIL PAUL MULLEN AT:

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#### WRITE TO:

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30 Cleveland Street,  
London W1T 4JD

When writing to *Helpfile*, please try to give full details of your problem. We also require both daytime and evening phone numbers in case we need more information. Although the policy of *Computer Shopper* is not to publish readers' email addresses, we include them in *Helpfile* so that other readers with experience of similar problems can share their solution (please also cc any comments to helpfile@computershopper.co.uk). If you would prefer not to have your email address published, please say so.

#### PAUL MULLEN

Paul has been a transport demand forecaster, economic adviser to the government and IT consultant to many big companies, and has been using and writing software for personal computers since 1978

helpfile@computershopper.co.uk



## PC Hardware Annoyances

If you send our star letter, you'll receive a prize. This month's winner gets a copy of O'Reilly's *PC Hardware Annoyances*, which will help you fix any number of hardware problems. If you don't want to spend the rest of your life troubleshooting, make sure you keep this next to your PC along with the latest copy of *Computer Shopper*. Your PC woes will disappear.



## HARDWARE EXPANSION SLOTS

# CONFUSED ABOUT PCI EXPRESS CARDS

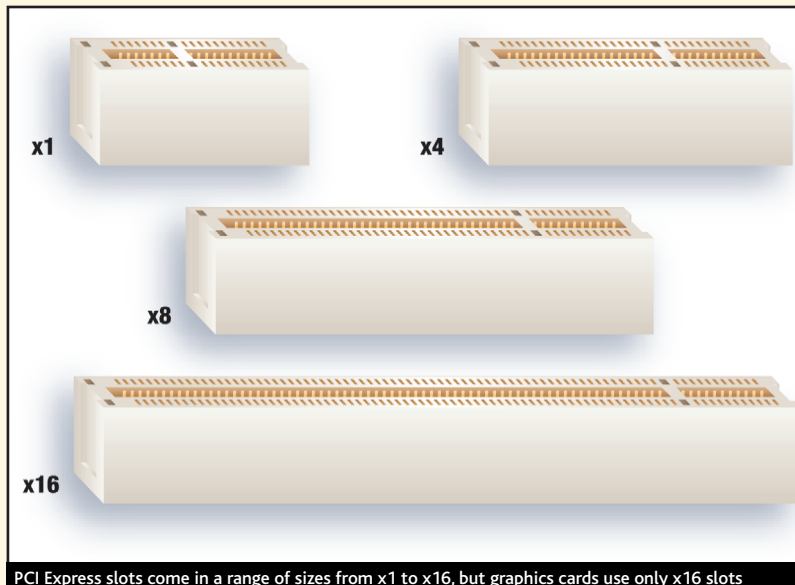
**Q** I bought a server from Dell, and the specification on the company's website clearly stated that it would have a PCI Express expansion slot. The slot in this server is divided into four sections, separated by three bars. A dealer showed me a photograph of a RAID PCI controller that has four parts on it, and it looked as if it would probably fit the slot on the server. But the PCI Express graphics cards I have seen will not fit into this slot.

Can you please tell me which type of graphics card I need to buy for this PCI slot? I want a graphics card for work, and I bought the computer for purposes besides being a server. I have sent Dell an email requesting clarification of the slot, but no-one has replied yet. I think I may face a lot of problems trying to resolve this.

David Marshall, dave@themarshall.plus.com

**A** You probably can't fit a PCI Express graphics card, I'm afraid. PCI Express slots come in different sizes, such as x1, x4, x8 and x16. All PCI Express graphics cards are designed to use the x16 slot, which appears in place of an Accelerated Graphics Port (AGP) slot on high-end motherboards. We should see x1 slots replacing the older PCI slots, x8 slots in servers and x16 slots replacing AGP slots. Your server has only x8 PCI Express slots. Also, the slot you describe sounds more like a PCI-X slot, a different standard entirely.

PCI Express (or PCI-E) is very different to the original Peripheral Component Interconnect (PCI) bus. The original PCI bus was a parallel data system,



PCI Express slots come in a range of sizes from x1 to x16, but graphics cards use only x16 slots

and the new PCI Express is a serial system. A serial system sends bits of data one after another rather than all together, but it can be clocked at a much higher speed. The PCI Express sub-system consists of several PCI 'lanes'. A single PCI lane has a transfer rate of 250MB/s in one direction and 500MB/s in both directions, which is known as full duplex. By comparison, the parallel PCI bus has a maximum bandwidth of 132MB/s, but this is shared between all the PCI devices on the bus. As far as the operating system is concerned, apart from speed, PCI Express cards are identical to other PCI cards, and they use similar drivers.

The size of the PCI Express slot depends on the number of lanes it has. Where more lanes are used, more pins are needed to connect the card to the motherboard. You should be able to insert a smaller PCI Express card into a larger slot, but a x16 card will not fit into a smaller PCI Express slot. New motherboards usually have one or two x16 PCI

Express slots, replacing the AGP slot, and a few x1 slots. The latter supersede the old PCI slots. The x4, x8 and x12 variants are likely to be seen only on servers. More details, intended for engineers, can be found at [www.express-lane.org](http://www.express-lane.org).

For a long time, graphics cards have used the AGP bus to get round PCI's bandwidth limitations. However, it seems that AGP has also reached the end of the road and is being replaced by a x16 PCI Express slot. All PCI Express graphics cards use x16 slots, and a card plugged into this port can use all 16 channels for itself, allowing a maximum transfer rate of 4GB/s in a single direction, compared to the maximum 2GB/s that an AGP 8x card could manage.

Dell servers are intended for use only as servers. As you have found, yours comes with two x8 PCI Express slots intended for high-speed input/output (I/O) cards, such as a RAID controller or gigabit Ethernet card. An x16 graphics card will not fit, and I doubt that anyone will produce an x8 version of their graphics card, given the tiny potential market. As almost all current systems still have PCI (or PCI-X) slots, few card manufacturers have bothered to produce x1 or x8 PCI Express cards.

Dell also makes a Precision line of high-performance workstations designed for more demanding applications such as computer-aided design (CAD) and professional video-editing. These may share some characteristics with servers, such as high-performance disk drive systems, but generally they have superior graphics capabilities. Most of Dell's desktop workstations have x16 PCI Express graphics slots and would be more suitable for your needs.

## INTERNET EMAIL SETTINGS

# EMAIL SERVERS KEEP RESETTNG

**Q** Every time I start up my PC, my email accounts fail to work. When I check the account details, the incoming mail server is set to an IP address of 127.0.0.1. I understand that this is the loop-back address, which refers to my own computer.

I back up my account settings, so it takes only a few seconds to restore them, but I'm at a loss as to why it's happening. Am I the victim of a Trojan, some sort of malware or a spammer?

Stephen Wells, sjwells53@onetel.com

**A** As you stated, the address 127.0.0.1 refers to your own computer. This means your email program is trying to collect email from a server running on your own computer.

Although this may seem odd, it used to be the way most anti-virus programs scanned incoming email. They changed the settings in your email program to point to 127.0.0.1 and ran a local mail server that collected the mail from your internet service provider (ISP), scanned it for viruses and passed it on to your email client.

As this mechanism was so easily broken – not least by well-meaning users who were puzzled that their settings had changed – most anti-virus software no longer works this way. Now they tend to run in the background and intercept all network traffic that uses the Transmission Control Protocol (TCP) ports 110 and 25. Port 110 is used by POP3 servers, which hold your email until you're ready to collect it. Port 25 is used by SMTP servers, which

accept mail from your computer and pass it on to the recipient. That way, anti-virus programs catch email that's sent from any program on your computer, including your email client, as well as viruses that install their own email server. However, the 127.0.0.1 address is still used by some anti-virus software and by many anti-spam tools.

The changed addresses are probably the result of a utility you have installed on your own PC. This is not working properly, or you would be able to send and receive email with the 127.0.0.1 setting. You should uninstall all anti-virus and anti-spam tools. Make sure your email is working and then reinstall the programs one by one. It is possible that two email add-on programs that work fine on their own won't work in combination.



## FAQ

## REMOVING COOLWEBSEARCH SPYWARE

EVEN WHEN YOU THINK YOU'VE GOT RID OF SOME SPYWARE, IT CAN HANG AROUND CAUSING TROUBLE. HERE'S HOW TO RID YOUR PC OF CWS

**Q** While I was browsing the web, some spyware called CoolWebSearch or CWS installed itself on my PC. This spyware redirects my browser to the CWS site instead of my home page. I have tried many anti-spyware tools to remove it, so far without success.

I thought I had managed to remove it with Microsoft's AntiSpyware Beta1, but every time I switch on my PC, Microsoft AntiSpyware pops up to tell me that CWS is trying to install and asks me if I want to stop it.

Clearly the removal was not completely successful and something is installed on my PC that AntiSpyware couldn't remove.

Sinan Al-Jassar, [sinanaljassar@yahoo.co.uk](mailto:sinanaljassar@yahoo.co.uk)

**A** CoolWebSearch comes in many varieties, and all are difficult to remove. A recent form of CWS is a variation on About Blank – so called because it reports that Internet Explorer is set to open to a blank page, or

'About:Blank', when really it accesses a page from an executable file on your PC. This form of CWS, along with earlier versions, uses two components that run even when the PC starts in safe mode. Each restarts the other if an anti-spyware tool manages to stop one. In this particular variant, the first component is named se.dll and is found in the Windows\temp folder. The second is a randomly named .dll file found in the Windows\System or System32 folders.

The new variant adds a third component that borrows techniques first developed by stealth virus writers. This stealth component filters system calls, so it does not appear in the list of running tasks and doesn't show up in the file system. Furthermore, its system hooks are not seen in the Registry when viewed either by RegEdit or a program such as HijackThis. In my system, the stealth component was hidden in a file called sandstole.bmp, although this filename did not appear when I searched the hard disk and Registry.

In this situation, all anti-spyware software and even HijackThis reports nothing suspicious and yet Microsoft AntiSpyware keeps on reporting attempts to change the system.

Fortunately, a clever German programmer has written a tool that tracks down and removes this stealth component. You can download the Windows 9x version of the SpSeHjfix utility from <http://derbilk.de/SpSeHjfix109.zip> and the Windows 2000 and XP version from <http://derbilk.de/SpSeHjfix112.zip>.

This tool deals only with one variant of CWS. If it doesn't find a problem, try CWSShredder from <http://cws shredder.net/bin/CWS shredder.exe>. CWSShredder was originally developed by Merijn Bellekom but is now owned and maintained by InterMute, which supplies CWSShredder for free to promote its SpySubtract PRO anti-spyware product. CWSShredder is updated periodically, so it can detect new CoolWebSearch variants. But at the time of writing, it had not been updated to deal with the variant described here.

## WINDOWS SYSTEM RECOVERY

## HELP, I'VE GOT NO RECOVERY CD

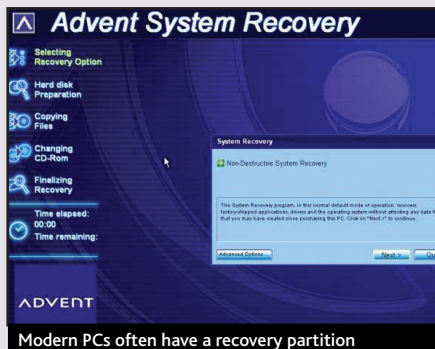
**Q** I was restoring a backup disk to my Advent T9003 PC but stopped during the process. Since then, the PC has been unusable. Advent's technicians say it's a software problem. They gave me the address of a website where I can buy a recovery CD, but the one I need is not listed.

Can you tell me Advent's address or suggest where I might get a disc? The PC has been wiped and asks for a disc to be inserted.

John Simcock, [john\\_simcock@amserve.com](mailto:john_simcock@amserve.com)

**A** Advent Computers is a brand of the Dixons group, which includes PC World. You can get help from [www.pcservicecall.co.uk](http://www.pcservicecall.co.uk). Advent's site is at [www.adventcomputers.co.uk](http://www.adventcomputers.co.uk).

Many modern PCs store system recovery software in a hidden partition on the hard disk. Provided it's intact and you haven't removed



it with a low-level disk utility such as Fdisk, you should be able to restore Windows by pressing F10 repeatedly as the PC starts. You should see the 'Starting System Recovery' message. Advent's default option is to restore Windows without destroying user data.

As long as the partition is intact and Windows is running, you can create your own recovery CDs using the Recovery CD Creation utility provided. It's best to do this before you have a problem, of course. If you have no CDs and no partition, you can get recovery CDs for £5 from [www.dsgrecovery.com](http://www.dsgrecovery.com) or call 0870 9013000.

## LAPTOPS PARTS

## FINDING PARTS FOR A MULTIVISION LAPTOP

**Q** I bought a Multivision Arcus 5070 notebook (UNI-251S9) in October 2003. About nine months later, Multivision ceased trading. Six months ago, my keyboard started to play up and now certain letters on the bottom row don't work.

I have been to three laptop repair firms and they can't find a keyboard that fits. One company told me that the keyboard was made by Chicony – a large company in Taiwan that makes keyboards for a lot of companies.

This laptop is very important to me and my business. I am a director of a publishing company, and most of the company information is on it, as I work between offices and home, and out with clients. It also has a company presentation on it, which I use when visiting new organisations. I had the laptop configured to my specifications when I bought it and it was quite expensive. I certainly don't want to throw it away. I know you can use a separate keyboard, but it is not so easy when travelling. Please can you help?

Barry Spouge, [bspouge@supanet.com](mailto:bspouge@supanet.com)

**A** Laptops such as yours are made by Far Eastern manufacturers and sold in the UK under a variety of names. Sadly, few resellers bother to stock spare parts for their systems and the manufacturers are not interested in after-sales support.

While generic parts are plentiful for desktop PCs, this is not true of laptops whose parts, with the exception of hard disks, are rarely interchangeable. That is why we recommend that readers buy laptops from major brands. I doubt that Chicony would sell an individual keyboard, as it deals in batches of thousands, but you can try. The UK phone number is 01475 657300.

It sounds as if your laptop was built by Uniwill Computers in Taiwan, a subsidiary of Lite-On. The model number appears to be 251S9. Similar PCs have been sold under many names, including Genicom and Advent, which is a Dixons/PC World brand. Certain sellers have near-identical looking models in their current range.

Your best bet is to scan eBay and try to find one of these similar computers that you could cannibalise for spare parts.





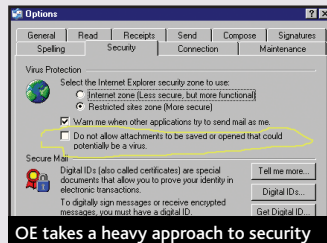
## SECURITY OUTLOOK EXPRESS

# DIFFICULTY OPENING EMAIL ATTACHMENTS

**Q** F-Secure anti-virus has received excellent reviews in *Computer Shopper* in the past year. However, its email scanner has a habit of removing and discarding attachments instead of quarantining them. I discovered this when emails

from Watford Electronics arrived in Outlook Express 6, each saying, "OE removed access to the following unsafe attachments in your mail: O5753361.pdf". When told of the problem, Watford helpfully sent all the documents again and I retrieved them from my ISP's web mail system. I have had no difficulty with Zip files.

F-Secure's UK telephone support, which costs 75p per minute, says that removed attachments are not stored in a quarantine file so they can't be recovered and scanned manually later. As far as I can see, the only workaround is to configure F-Secure's email scanner to exclude PDF and TIF attachments.



OE takes a heavy approach to security

However, it is not clear whether they would then be excluded from a manual scan.

This is very clumsy and it seems that one needs to be able to predict the kind of email attachments they will receive in the future. Is there a better way to deal with this problem, or should I say

goodbye to F-Secure and get a better product?

JM Redwood, by email

**A** It's not F-Secure's fault: Outlook Express is causing your problem. F-Secure removes only attachments that are infected by a virus, and if the virus infects a valid file it removes only the virus portion of that file. Your message said, "OE removed access to the following unsafe attachments in your mail: O5753361.pdf". That is precisely what has happened. OE refers to Outlook Express. The attachments were not removed, but Outlook Express is preventing you accessing them. One of the latest security patches

for Outlook Express stops you opening any attachment with an extension that means it could harbour a virus. Microsoft wanted to make sure that clueless OE users could not open a virus-infected attachment by mistake, so it removed the ability to open almost any attachment. Right-click the attachment, choose Properties, Unblock and you should be able to open it.

To see the full list of blocked file types, visit the Microsoft Knowledge Base, article 883260 (<http://support.microsoft.com/?kbid=883260>).

As you say, Microsoft lets Outlook Express users open Zip files, so now the latest viruses such as Sober.P come in Zip files. Your email program will open virus-infected Zip files, even though few typical users use this format when sending email.

As you have anti-virus protection, you should open Outlook Express and go to Tools, Options and Security. You'll find a check box labelled 'Do not allow attachments to be saved or opened that could potentially contain a virus'. Remove the tick from this box and you will be able to open these attachments. Outlook Express will still warn you that they may contain a virus.

## WINDOWS SERVICE PACK 2

# ERRORS WHEN INSTALLING WINDOWS XP SP2

**Q** I've tried installing Service Pack 2 (SP2) three times on my Windows XP Professional PC. Every time, it shows a blue screen and restarts. The third time I installed it, I disabled automatic restarting, and this error message appeared on a blue screen: "A problem has been detected and Windows has been shut down to prevent damage to your computer." The error number is Stop:0x0000008E (0xc0000005, 0xF8A56510, 0xF894D068, 0x00000000).

Microsoft has suggested a few things, such as making sure there is enough disk space and disabling memory caching and shadowing. I have

enough disk space and both memory options are disabled. I typed the first batch of numbers into the Microsoft website, but it didn't provide any information relevant to my problem.

Phil Bailey, pgb95@hotmail.com

**A** Stoppage with error code 0x0000008E often suggests a fault in the way memory is accessed. SP2 performs more memory access checks than unpatched versions of Windows and tries to prevent programs overwriting memory belonging to others. The problem was probably there all along but undetected before you installed SP2.

Such errors are often due to faulty memory. It may be the RAM modules in your PC or timing issues due to your BIOS settings. Download and run the Microsoft Memory Diagnostic program from <http://oca.microsoft.com/en/winddiag.asp>. Also try resetting the BIOS timings to default values and look for an updated BIOS. If you have more than one memory module, try removing one of them.

The next most likely cause is a buggy or incompatible hardware driver. Try removing or disabling all unnecessary hardware and set your graphics card to use one of the standard Windows drivers.

## WINDOWS SYSTEM RESTORE

# I CAN'T RUN PROGRAMS OR REINSTALL WINDOWS

**Q** While using the Spybot anti-spyware program that came with *Shopper* April 2005, the program crashed. Since then, I have been unable to open a lot of the programs on my PC. A message says, "This file does not have a program associated with it for performing this action. Create an association in the Folder Options Control Panel." I can't do this as I am unable to open the Folder Options Control Panel. I have tried to uninstall Windows XP to reinstall it, but that doesn't work either.

Jeff Park, jeff.park@homecall.co.uk

**A** This sounds like a corrupted Windows Registry. There were probably some bad entries in the Registry that came to light

when Spybot deleted others. Registry errors can also be caused by bad sectors on your hard disk. Back up your data first and then run Chkdsk with the Thorough option enabled to test for bad sectors.

If your hard disk is OK, you have two options. First, you could use System Restore to retrieve an uncorrupted copy of the Registry. Go to Start, All Programs, Accessories, System Tools, and click System Restore. If it runs, you can locate a previous restore point and all should be well. If not, restart your PC and, before a Windows screen appears, press F8 repeatedly to get the Windows startup menu. Choose 'Safe mode with command prompt'. At the command prompt, enter 'windows\system32\restore\rstrui.exe'. This should run System Restore. If that doesn't work, or if System Restore

says that no restore points exist, get hold of Microsoft Knowledge Base article 307545, which is available from (<http://support.microsoft.com/?kbid=307545>). This explains how to copy previous versions of the Registry using the Recovery Console.

At this point you may prefer to reinstall Windows. If the Registry is not too badly damaged, a repair install will fix it while preserving most user settings, installed applications and preferences. You may need to reinstall some applications, though.

To reinstall Windows XP, set the BIOS options to boot from the CD drive and insert the Windows installation CD before rebooting. Some PC makers don't provide a CD but place the reinstallation files in a hidden recovery partition on the hard disk. If so, follow the instructions in the manual.

## FACTFILE

# INSTALL WINDOWS 98 ON A WINDOWS XP PC

IT'S NOT THAT EASY TO INSTALL AN OLDER VERSION OF WINDOWS ON A COMPUTER WITH WINDOWS XP RUNNING, BUT IT IS POSSIBLE. HERE'S HOW TO INSTALL WINDOWS 98 AS A DUAL-BOOT OPTION ON A WINDOWS XP SYSTEM

**Q** I have programs that work with Windows 98 SE but not Windows XP, which my new PC runs. The program compatibility software doesn't work for my Agfa scanner, so I want to install Windows 98 SE.

To have two operating systems on a computer, Microsoft's website says the older operating system should be installed first. But my newer computer already has XP preinstalled, and there's only a recovery CD to help fix problems. *Neville Walters, nevillewalt@eircom.net*

**A** Windows XP was designed to be easy to install on a system that already has an older version of Windows. Doing it the other way round is harder, but not impossible. The process we are going to describe here is recommended only for advanced users.

### MAKE SPACE FOR WINDOWS 98

First, you need a boot floppy that allows you to boot into Windows XP. This is a useful disk to have in case your Windows XP boot files get damaged, which will almost certainly happen during the following procedures. Format a floppy disk in Windows XP by right-clicking on the floppy icon and choosing Format. Copy the following files from the root directory of your Windows XP drive on to the floppy: NTLDR, NTDETECT.COM and BOOT.INI. To view and copy these files in Explorer, go to Tools, Folder Options, View, select the option to show hidden files and deselect the option to hide protected system files. If your PC has a SCSI or non-standard drive controller that isn't supported by the BIOS, you will also need to copy the device driver for that controller to the floppy and rename it ntbootdd.sys.

The default drive partition type for most new Windows XP systems is the new technology file system (NTFS), which old versions of Windows such as Windows 98 cannot read. To boot to an older version of Windows the boot partition, which is usually the first partition on the first hard drive in the system, has to be formatted using the older FAT32 file system. However, your recovery CD usually won't have an option to change to FAT32.

If you are stuck with an NTFS-formatted Windows XP partition, the easiest way to add a FAT32 boot partition is to add another hard disk, perhaps using the disk from your old system. Make the Windows XP drive the second drive; move it to the secondary IDE controller or make it the slave drive on the primary controller. A PC always tries to boot from the first hard disk the BIOS sees.

Another way to get a FAT partition is to shrink the NTFS partition to make room for a FAT partition on the same drive. This works only if the FAT32 partition is created as a primary partition and is set as Active. At one time only Partition Magic could do this, but now you can buy Acronis for US\$50 (around £28) from [www.acronis.com](http://www.acronis.com) and Paragon for US\$30 (around £16) from [www.partition-manager.com](http://www.partition-manager.com). We'll be giving away a partitioning tool on next month's cover disc. There are also free choices such as the Linux-NTFS package that's bundled with many

Linux distributions. All claim to offer non-destructive resizing of partitions, but this is a very dangerous operation that you should attempt only after backing up all your data.

To make sure the FAT partition is the one marked as Active, boot to Windows 98 and use Fdisk. Once you have done this, you should be able to boot from a Windows 98 startup floppy disk or CD, if you are lucky enough to have a bootable Windows 98 CD, and install Windows 98 to the FAT32 partition, which will appear as drive C:. The NTFS partition won't be seen at all.

### ENABLE WINDOWS XP

The next step is to test your Windows XP boot floppy to see if it still finds the Windows XP installation. You will need to make some changes to it if you moved the Windows XP drive. You may also need to change it if you resized and added another partition to the original drive, depending on the way you added the extra partition.

From within Windows, locate the boot.ini file on the floppy, right-click on it and select Properties; make sure the read-only attribute is not ticked. You should be able to click on it to open it in Notepad. You'll see something like this:

```
[boot loader]
timeout=30
default=multi(0)disk(0)rdisk(0)
partition(1)\WINDOWS
[operating systems]
multi(0)disk(0)rdisk(0)partition(1)\
WINDOWS="Windows XP" /fastdetect
```

The multi(0)disk(0) entry simply tells the boot loader to use hard drives identified by the BIOS. The drive you should boot from is indicated by the number after rdisk. The first drive on the system is labelled 0, and the partitions on that disk are numbered in the order of the Master Partition table, starting with number 1. If you have moved the Windows XP drive to be the second hard disk, you would change rdisk(0) to rdisk(1). In some cases, where you have added the new partition to the same drive as Windows XP, the partition value for XP may change from 1 to 2. Change the Default line as well as the one under [operating systems].

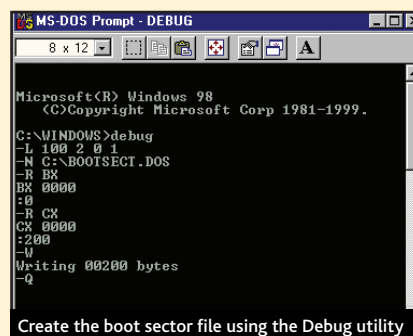
You can add a line that gives you the choice of booting to Windows 98. This line will simply read:

```
C:\="Windows 98"
```

The C:\ indicates the first FAT or FAT32 hard disk that the disk loader sees. Save the file, then try booting to Windows XP.

### BOOT WINDOWS 98 FROM A FLOPPY

The floppy disk will not yet let you boot into Windows 98. As it was formatted using Windows XP, it has only an XP boot sector, which loads NTLDR, the Windows 2000/XP boot manager. When NTLDR sees a DOS-style drive letter it knows that we want it to load a DOS-based operating system such as



MS-DOS or Windows 98. These operating systems use the boot sector to load the first operating system files. But our boot sector is an XP one, not a DOS one, so it doesn't know what to do.

To get round this problem, the NT loader looks for a file called Bootsect.Dos, which contains a copy of the boot sector from a DOS-based system. To create this file, boot to Windows 98 and click on Start, then Run. Type in DEBUG then click OK. Debug is an old-fashioned utility from the earliest days of DOS. Its command prompt is just a minus sign on a black screen. Type the following commands exactly:

```
L 100 2 0 1
N C:\BOOTSECT.DOS
R BX
0
R CX
200
W
Q
```

If you have done this correctly, your file will be 512 bytes long. Copy this file to your floppy and test it by rebooting from the floppy disk. You should be able to boot to either operating system using the floppy disk.

### BOOT WINDOWS 98 WITHOUT A FLOPPY

Booting from a floppy all the time is not very convenient, so copy the files called NTLDR, Ntldetect.com, Boot.ini and Bootsect.Dos from the floppy to the first FAT32 drive. Then replace the DOS-style boot sector code on that drive with the Windows XP boot code. If you can get hold of a proper Windows XP CD, this is easy. You can boot to the Recovery Console and type the command FIXBOOT. Unfortunately, many so-called Recovery CDs omit the Recovery Console and its repair tools.

If your PC manufacturer did not provide the Recovery Console option, and you can't borrow a Windows XP CD, you'll need six floppy disks and a lot of patience. Visit <http://support.microsoft.com/kb/310994> and download the appropriate version of Windows XP Setup Floppy Creator. These floppies also contain the Recovery Console.



## MUSIC SPEAKERS

## ANNOYING MUSIC VIBRATIONS

**Q** I recently bought a Logitech 2.1 speaker system and I am pleased with the amount of bass it produces. However, I don't have enough room to put the sub-woofer down on the floor by my feet, so I have placed it on top of my PC case, which is under my desk.

I like to have the volume up loud and wondered if the vibrations from the sub-woofer could damage the components or the hard disk in the case. Should I move it, or will it do no harm to the insides of my PC?

Mike Doughty, mikey\_789654@hotmail.com



▲ Can the bass from a sub-woofer damage your hard disk? Answers on a postcard please

**A** As far as I know, no-one has conducted any definitive research on this. But there are plenty of documented cases where vibrations from powerful professional sub-woofer systems of the kind used by rock bands, have caused the screws inside amplifiers to shake loose.

Damage to hard disks is likely to result if the heads, which fly over the surface of the platter at a microscopic distance, bounce up and crash down on to the platter. There are two different kinds of movement that affect hard disks: shock and vibration. Shock is what happens if you drop your laptop computer – even a fall of one inch has been known to damage a hard disk. The sudden deceleration of a small object results in much larger G forces than for a large object, so manufacturers try to mount the drive to the frame of the computer. That way, it is protected from shock by the mass of the computer.

Unfortunately, the rigid mountings you need to reduce shock damage are likely to transmit vibration. Laptop makers have spent a great deal of time designing drive mounts that are rigid enough

to reduce shock but flexible enough to damp out vibration. The quality of drive mountings is one of the things that distinguishes major-brand business laptops from their cheaper consumer devices.

In a desktop system, the drives are simply screwed into the case and have no vibration-absorbing mountings. If you look at the Hitachi Global Storage website (formerly IBM), you'll see that the specifications for its Deskstar drives quote a maximum operating shock of 160G, but a maximum random vibration of just 0.67G. Vibration is a tricky thing: if the vibration's frequency or its harmonics happen to match the resonant frequency of the drive's head assembly, the vibration will have much greater impact than vibrations at other frequencies.

It would take a professional engineer specialising in vibration to analyse the situation fully. Hopefully an expert reader will come to my aid. But I wouldn't like to bet that the sub-woofer will never hit the resonant frequency of the hard disk's head assembly. Try to find somewhere else to put your sub-woofer.

## SECURITY FIREWALLS

## DO I NEED ANOTHER FIREWALL?

**Q** I am using a NetGear DG834G wireless networking router with two PCs connected to it. As this router has a firewall built into it, I have been without a software firewall, excluding Windows' built-in one. I was told that the firewall built in to the router was sufficient. Then I read *Shopper* June 2005, which recommended that a software firewall should be used as well as a hardware one.

Application control seems like a sensible idea, as the hardware firewall doesn't provide this, but should I pay for a good software firewall, or would a free firewall such as ZoneAlarm 5.5 or Sygate's free version be sufficient?

Michael Rewaj, by email

**A** The firewall in most cheap routers is limited and does nothing to detect spyware, Trojans or other rogue applications that have already got on to your PC. We recommend a firewall that checks which applications are accessing the internet.

ZoneAlarm was the first firewall to do this. Sygate has also been making firewalls for years. Both offer a basic firewall free for personal use.

In our review of firewall software (*Labs, Shopper* June 2005), we found that both ZoneAlarm and Sygate do a good job. Sygate uses fewer resources, while ZoneAlarm is simpler for less technical users to install.

## EMAIL OUTLOOK

## OUTLOOK CRASHES WHEN EMAIL WINDOW IS CLOSED

**Q** Outlook 2000 with Service Pack 3 closes automatically every time I close an email message. Can you help me overcome this irritating problem?

Manoj Ranaweera, ranaweeram@ntlworld.com

**A** Outlook, which is part of Microsoft Office, has lots of customisation options, so plenty of things can go wrong. An add-on component, such as a spam blocker, may be causing this behaviour. Go to Tools, Options, Other, Advanced Options and review and disable the items listed under AddIn Manager and COM Addins.

If you use Windows 2000 or XP, the event viewer may report what happened. You will find it under Control Panel, Admin Tools. Run Event Viewer and look under Application Errors. It is always worth going to the Office update site (<http://office.microsoft.com>) and checking for updates to your copy of Office, which may contain bug fixes.

If you have Outlook 2000 or later, you can start Outlook in safe mode, which does not load

add-ons. From Windows, click on Start, Run and type C:\Program Files\Microsoft Office\Office\Outlook.exe /safe. If you have Office XP or 2003, another way to get into safe mode is to hold down the Ctrl key while starting the application. This works for all Office XP or 2003 applications.

Safe mode displays additional diagnostic messages when it finds a problem. If safe mode solves the problem, go to Help, About Microsoft Outlook, and click Disabled Items. This opens a dialog box that lists the items Outlook has disabled. You can then try to correct the problem by disabling or removing an add-in. In safe mode you can also click Help, then Detect and Repair.

The Microsoft Knowledge Base article 197180 (<http://support.microsoft.com/?kbid=197180>) lists other command line options for fixing Outlook problems. For example, /resetfolders repairs certain types of damaged folders in your PST file.

If your problems persist, make sure Outlook is closed and search for a file called outcmd.dat. In older versions of Windows, you'll find it in C:\Windows\Application Data\Microsoft\Outlook. In

Windows 2000 or XP it's in the Application Data folders under your Documents and Settings profile. Application Data is a hidden folder, so select the option to search these. Outcmd.dat contains the toolbar settings. Delete or rename this file. When you next run Outlook, it should be recreated.

Next, try running scanpst.exe, which you'll find in the Microsoft Office folder. It searches for and repairs corruption in your PST file. If that doesn't fix the problem, you may have a corrupt profile. Try to create a new profile in Outlook as follows. On the Start menu, click Control Panel. If you are running Windows XP, tick the 'Switch to Classic View' option and open the Mail Setup dialog box, then click the 'Show Profiles' button on the General tab and tick the 'Prompt for a profile to be used' box. Next click Add. In the Profile Name box, type a descriptive name for the new profile and click OK. In the E-mail Accounts dialog box, click 'Add a new e-mail account' and click Next. Select the appropriate server type for your new email account and click Next. Fill in the details as prompted, and click Next and Finish as needed. Finally, click OK.